

### **REMARKS/ARGUMENTS**

These remarks are submitted responsive to the office action dated February 25, 2005 (Office Action). As this response is timely filed within the 3-month shortened statutory period, no fee is believed due.

Claims 1-20 have been rejected under U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,652,828 to Silverman, *et al.* (Silverman) in view of U.S. Patent No. 6,631,346 to Karaorman, *et al.* (Karaorman).

Applicants have amended claims 1 and 11 to clarify that phrase markers specify timing information corresponding to previously dictated speech and that the pausing step occurs in accordance with the specified timing information. These amendments are fully supported by page 7, lines 10-13 and 19-26; by page 11, lines 19-21; by FIG. 4; and throughout the specification. No new matter has been added.

#### **A. Karaorman should be removed as a reference under 37 C.F.R. § 1.131**

Applicants have enclosed declarations under 37 C.F.R. § 1.131 supporting the removal of Karaorman as a reference. The declarations are accompanied by a copy of the Applicants' Confidential Invention Disclosure BOC8-1998-0120 (Disclosure) entitled "Using Speech Recognition Phrase Markers to Guide the Timing of Text-To-Speech Output." The Disclosure and declarations demonstrate proof of conception for the claimed subject matter of the Applicants' invention at least as early as December 10, 1998, which predates the effective date of Karaorman

of April 7, 1999. Applicants note that both the Disclosure and Declarations constitute evidence under MPEP 715.07 (specifically under 715.07(F) and 715.07(H)).

The Disclosure is a completion of an International Business Machines Corporation (IBM) confidential disclosure form, which is a standardized IBM document utilized by and submitted by the inventors upon conception of an invention. The document management system under which the IBM confidential disclosure form has been generated does not permit amendments to be made to the disclosure once the disclosure has been completed. Any changes and/or additions are appended as an attachment to the IBM confidential disclosure form along with the date the attachment was added. No such attachment accompanies the Disclosure, signifying that the Disclosure has not been amended since December 10, 1998.

The IBM confidential disclosure form provides all information necessary for outside legal counsel to prepare an appropriate patent application relative to the disclosed invention when used in conjunction with information known by one of skill in the art. The present Application, including each claim within the present Application, has been prepared based upon the Disclosure. Further, as noted in the enclosed Declarations, prior to submission of the Application to the U. S. Patent and Trademark Office (USPTO), the inventors review the Application to assure that the claims and material contained therein are fully supported by the Disclosure. Statements to the affect of the above are included within the signed declarations, which thereby constitute supporting evidence for the facts asserted above.

To further elaborate upon the element of Conception in this case, Applicants have Conceived of the invention prior to the effective date of the reference (and exercised diligence

from prior to the reference date to the filing date of the Application). Conception is established when the invention is made sufficiently clear to enable one skilled in the art to reduce it to practice without the exercise of extensive experimentation or the exercise of inventive skill (MPEP 2138.04 – definition for conception defined for interference that is applicable to 1.131 declarations under MPEP 715.07). This section states that for the most part, the terms conception, reasonable diligence, and reduction to practice have the same meanings under 1.131 as they have in interference proceedings. The difference between the two being the level of proof required, where interference proceedings require a higher level of proof than that required for a 1.131 declaration as in that averments made in a 1.131 declaration do not require corroboration, meaning an applicant may stand on his or her own affidavit or declaration (See MPEP 715.07).

Each claimed limitation is fully supported for purposes of Conception by the Disclosure. For example, in claim 1, Applicants claim the steps of: retrieving tokens in a text-to-speech (TTS) system, said tokens comprising words, phrase markers, punctuation marks and meta-tags; identifying said phrase markers among said retrieved tokens, said phrase markers specifying timing information corresponding to previously dictated speech; identifying said words among said retrieved tokens; playing back said identified words using said TTS system; and pausing said TTS playback in response to said identification of said phrase markers in accordance with said specified timing information.

One of ordinary skill in the art based upon the Disclosure could derive claim 1 (and all other claims) without the exercise of extensive experimentation or the exercise of inventive skill based upon the flow chart on page 3 of the Disclosure, which from page 2 describes a way to

achieve integration between phrase marker data in dictated text and TTS production (a token refers to a word, punctuation mark, or any other symbol or tag that the TTS interprets during playback).

Applicants further exercised due diligence from prior to the effective date of Karaorman (April 7, 1999) until March 09, 2000, the filing date of the instant application. Applicants note from MPEP 715.07(a) that Diligence within the meaning of patent law can occur when an Applicant is doing nothing, if his or her lack of activity is excused. The record must set forth an explanation or excuse for the inactivity.

In regard to Diligence, as set forth in the Declarations, once an IBM invention disclosure form is completed, the Disclosure is reviewed by an invention review board within IBM to determine whether to prepare an application based upon the submitted disclosure. Upon reaching a decision to prepare an application, outside counsel is selected, instructions in this regard along with the IBM invention disclosure form are conveyed to the outside counsel. The outside counsel prepares a draft of the Application that is iteratively reviewed by each inventor until such time that the inventors are satisfied that the Application sufficiently details the inventive concepts detailed in the Disclosure, at which time the Application is expeditiously filed with the USPTO.

In the present case, IBM sent official authorization to outside counsel to prepare this application on March 16, 1999 (Exhibit "A"). Outside counsel prepares cases on a "first come, first served" basis, where applications associated with bar dates are granted priority within the work queue. This is a common practice in the industry followed by a significant portion of patent firms and believed to be reasonable by the majority of large entities with substantial patent

portfolios, such as IBM. As proof that the present application was included within the work queue and receiving attention therein, Applicants have provided pages from their Firm Docket regarding the instant application dated April 4, 1999, June 4, 1999, August 16, 1999, September 16, 1999, December 10, 1999, January 15, 2000, and February 15, 2000 (redacted to insure confidentiality of other Firm clients and attached as Composite Exhibit "B").

The instant case was drafted on February 11, 2000 and submitted to the inventors for review (Exhibit "C"). Applicants and outside counsel interacted between February 11, 2000 and March 09, 2000 to finalize the patent submission, which is the filing date of the present invention. In light of the present application being completed in a timely fashion in accordance with common industry practices, practices which were followed in this case as evidenced by the enclosed attachments and sworn Declarations, Applicants believe this practice and associated delays constitute an acceptable explanation for inactivity in regard to Diligence under MPEP 715.07(a) for the time prior to the effective date of Karaorman to the filing date of the present Application.

In light of the above, Applicants have shown the present invention was Conceived before the effective date of Karaorman, and that Diligence was exercised in constructively reducing the invention to practice between the date of the Disclosure until the filing date. Accordingly, Karaorman should be withdrawn as a reference for purposes of 35 U.S.C. § 103(a), which action is respectfully requested. Withdrawal of Karaorman as a reference should result in a withdrawal of the rejections with respect to claims 1-20.

**B. Silverman fails to explicitly or implicitly teach each claimed limitation for which it is referenced**

Claims 1-20 have been rejected under U.S.C. § 103(a) as being unpatentable over Silverman in view of Karaorman. Applicants have already shown that the rejections should be withdrawn because Karaorman fails to predate the Applicants invention. The rejections should also be withdrawn, because each claimed limitation is not taught by the combination of references provided.

Specifically, Silverman is cited for teaching retrieving tokens in a text to speech system, identifying phrase markers among the received tokens, identifying words among the received tokens, text-to-speech playback of the identified words, and pausing text-to-speech playback in response to identified phrase markers. Silverman, however, fails to provide these teachings.

Applicants believe some confusion exists in citing Silverman with the use of the term phrase marker. Phrase marker has a different meaning in linguistics when used generally than it has when used specifically for text-to-speech systems. That is, Silverman uses the term phrase marker in a different manner than it is used within the claimed invention, which has been clarified by the amendments submitted herein.

A brief overview of the Applicants claimed invention and Silverman may be helpful to show this distinction. The Applicants have claimed a solution that produces proper pausing behavior of automatically generated speech (TTS output). Conventional techniques in existence before the Applicants' solution wholly lacked naturalized timing in consequence to conventional systems being dependent upon production rules. That is, conventional TTS systems did not

incorporate the use of timing data to achieve more naturalized playback (page 3, lines 14-27). The Applicants invented a solution where tokens can be identified and used during playback to generate natural pauses (page 4, lines 2-14). These tokens can be inserted during speech dictation by a speech dictation system (page 7, lines 12-14). The tokens can include phrase markers that specify timing information of the dictated speech (page 7, lines 10-12).

Accordingly, when the dictated speech is speech-to-text processed (i.e. the dictated speech is converted into text, which is referred to in the application as "dictated text"), tokens from the dictated speech can be inserted. When the text is text-to-speech converted, the tokens and particularly the phrase markers can be used to generate more naturally sounding speech. The generated speech can, for example, be an audible representation having similarities to the dictated speech from which the tokens were generated (column 11, lines 19-21).

Turning to Silverman, Silverman teaches an enhancement to standard TTS output to improve the comprehensibility of TTS output. Specifically, Silverman teaches a prosodic treatment of synthesized material to improve speaking rate and the spelling of words. As shown in FIG. 3, Silverman's teachings are dependent upon prosody rules, enhanced with further rules for adapting speaking rate, which is used by a prosody preprocessor. In this respect, Silverman teaches a TTS system dependent upon production rules, which conflicts with the Applicants claimed invention (column 3, lines 20-21) and the operating principles upon which the Applicants claimed invention relies.

In Silverman (column 13, lines 62-67) markers are embedded prosodic indicia added to text by the preprocessor according to prosodic rules of the preprocessor (which override or

supplement the rules in the synthesizer). Silverman teaches the conventional insertion of prosodic boundaries in accordance with prosodic rules of a speech synthesizer (column 17, lines 10-29). These prosodic rules include rules of the preprocessor (column 17, lines 61-64), where the rules allow for "larger boundaries" and "smaller boundaries". Thus, the markers taught by Silverman are "rule markers" that tell the pre-processor which of a series of rules are to be enabled. Detailed rules for a NAME field begin at column 19, line 30; for an ADDRESS field begin at column 22, line 41; and for SPELLING rules begin at column 25, line 16. It is clear from all of these references that Silverman lacks teachings that phrase markers are specify timing information of previously dictated speech.

Silverman explicitly acknowledges that its teachings are constrained by controls made available within commercial synthesizers (column 14, lines 10-14). That is, the contemplated teachings of Silverman use limited instructional markers present in commercial synthesizers (at the time). Hence the architecture and operating principles upon which Silverman is based, conflict with those needed to implement the Applicants' invention as claimed.

In summary, Silverman provides no teachings of using phrase markers that specify timing information corresponding to previously dictated speech to generate pauses in accordance with the timing information (when generating TTS output using previously text, which is text having inserted tokens). No other art referenced art cures the deficiencies of Silverman. Consequently, the rejections to claims 1-20 should be withdrawn on the basis that each claimed limitation is not taught by the cited references.



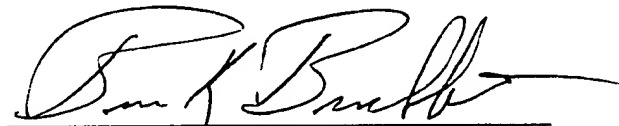
U.S. Patent Appln. No. 09/521,593  
Amendment Dated May 10, 2005  
Reply to Office Action of Feb 25, 2005  
Docket No. 6169-115

IBM Docket No. BOC9-1999-0019

Applicants believe that this application is now in full condition for allowance, which action is respectfully requested. The Applicants request that the Examiner call the undersigned (direct line 954-759-8937) if clarification is needed on any matter within this Amendment, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

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